

Notice of Allowability

Application No.

10/001,363

Examiner

Rip A. Lee

Applicant(s)

STEFFEN ET AL.

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1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to August 31, 2007.
2. ☒ The allowed claim(s) is/are 7, 11, 13 and 14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application
- ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
- ☒ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Valarie Calloway on October 31, 2007.

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| Claim 7, line 3 | delete "between" |
| Claim 7, line 4 | replace "and 13 %" with "to 13 %" |
| Claim 7, line 5 | delete "between" |
| Claim 7, line 5 | replace "and 44 %" with "to 44 %" |
| Claim 7, line 5 | insert "of" between "weight" and "titanium" |
| Claim 7, line 6 | replace "by weight, with" with "and" |
| Claim 7, line 6 | replace "comprising" with "is" |
| Claim 7, line 7 | delete "polymeric" |
| Claim 11, line 1 | replace "comprising a continuously extruded sheet in accordance" with "according to" |
| Claim 11, line 2 | delete "with" |

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- Claim 13, line 1 replace “comprising a continuously extruded sheet in accordance” with
“according to”
- Claim 13, line 2 delete “with”
- Claim 14, line 4 delete “and”
- Claim 14, line 5 insert “of” between “weight” and “titanium”
- Claim 14, line 5 delete “by weight,”
- Claim 14, line 6 insert “of” between “weight” and “low”
- Claim 14, line 6 delete “polymeric”

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Pending claims 7, 11, 13, and 14 are allowed over the closest references cited below.

The present invention is drawn to a film comprising a continuously extruded sheet containing a polyolefin polymeric material and a wetting agent provided in pellet form, wherein said wetting agent consists essentially of about 10 % to 13 % by weight of a wetting compound consisting of glycerol reacted with lauric acid, and about 38 % to 44 % by weight of titanium dioxide, and the balance of said wetting agent is a low density polyethylene carrier resin with which said wetting compound and said titanium dioxide are blended, and the film contains 0.2 % to 3.0 % by weight of said wetting compound.

Okuyama *et al.* (U.S. 4,704,238) teaches an air permeable film suitable for use in a disposable diaper or sanitary napkin. The film is composed of 42-87 vol % of low density polyethylene having a density of 0.910-0.928 g/cm³, 13-58 vol % of inorganic filler, and 3-25 parts by weight of a fatty acid ester, based on 100 parts by weight of polyethylene and filler. Titanium dioxide may be used as the filler, and glycerol laurate is listed as one of thirty-three useful fatty acid esters. Even if selection of the combination of filler and specific fatty acid ester were obvious, the composition would not meet the weight percentage requirements set forth in the instant claims because the weight percent of titanium dioxide ($d = 4.23 \text{ g/cm}^3$) in the extruded film would exceed that set forth in the instant claims.

A representative calculation is instructive. The instant claims cite a wetting agent consisting essentially of about 10-13 wt % of a wetting compound and about 38-44 wt % of TiO₂. The wetting agent is incorporated into the continuously extruded sheet in an amount of 0.2-3 wt %. For simplicity, a wetting agent containing 10 wt % of wetting compound in which the wetting compound is present in the extruded sheet in an amount of 1 wt % represents a "dilution" factor of one order of magnitude. Since the wetting agent is homogeneously distributed throughout the sheet, one may expect a similar dilution of the TiO₂ filler. That is, the extruded sheet containing the exemplified wetting compound would contain about 3.8-4.4 wt % of TiO₂.

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In contrast, the product in Okuyama *et al.* may contain a lower limit of 13 vol % of TiO_2 . For simplicity (omitting the fatty acid ester since the density of the fatty acid ester is not known), a sheet containing 87 wt % of LDPE (having a maximum density of 0.928 g/cm^3) and 13 vol % of TiO_2 would be comprised of $(87 \text{ cm}^3)(0.928 \text{ g/cm}^3) = 80.74 \text{ g LDPE}$ and $(13 \text{ cm}^3)(4.23 \text{ g/cm}^3) = 52.99 \text{ g TiO}_2$, corresponding to $(52.99)(100)/(52.99 + 80.74) = 39 \text{ wt \% of TiO}_2$.

Clearly, the amount of TiO_2 in the Okuyama *et al.* product is greater than that would be present in the extruded sheet of the instant invention. Therefore, it may be concluded that Okuyama *et al.* does not teach or make obvious the film described in the instant claims.

Sugimoto *et al.* (U.S. 4,087,505) discloses a tacky polyolefin film comprising a high pressure polyethylene having a density of about 0.922 g/cm^3 (LDPE), a low grade polyolefin, tackifier, and 0.05 to 2 wt % of a defogging agent such as glycerol laurate. The reference does not teach use of titanium dioxide for making film, and it would have been obvious to one having ordinary skill in the art to incorporate filler in the appropriate amount in order to make the film described in the instant claims.

Kusu *et al.* (JP 8-34882) teaches a film having excellent anti-fogging properties comprising 100 pw of linear polyethylene having a density of 0.920 g/cm^3 or lower, 1-5 parts by weight of diglycerol laurate, and 10-30 parts by weight of low density polyethylene. The reference does not teach use of titanium dioxide for making film, and it would have been obvious to one having ordinary skill in the art to incorporate filler in the appropriate amount in order to make the film described in the instant claims.

Nielsen (U.S. 6,395,812) teaches an anti-static composition comprising a first component consisting of monoglycerides having a fatty acid chain length of 4-14 carbons and a second component consisting of monoglycerides having a fatty acid chain length of 6-24 carbons. An example of the former is the reaction product of glycerol and lauric acid. Anti-static compositions may be incorporated into a polymer composition at a concentration of 0.3-1.0 wt % based on the total weight of the polymer composition. The anti-statics of the invention may be incorporated into a broad spectrum of thermoplastic and elastomeric polymer. While one of

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ordinary skill in the art may have found it obvious to make a thermoplastic article comprising low density polyethylene and the inventive anti-static composition (LDPE is recited in the list of polymers which may be used, and a composition containing HDPE/anti-static is shown in the working examples), the reference does not teach use of titanium dioxide, and it would have been obvious to one having ordinary skill in the art to incorporate filler in the appropriate amount in order to make the film described in the instant claims.

Cooper (U.S. 4,222,913) discloses a film prepared from a blend of polypropylene and ethylene vinyl acetate copolymer and about 0.3-5 wt % of glycerol monolaurate. Clearly, this reference does not teach the film of the instant invention.

An international search report, dated April 30, 2003, accompanies this application. The claims have been amended extensively during prosecution to the extent that the four cited references do not apply to the subject matter of the instant claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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October 31, 2007

/Vasu Jagannathan/
Supervisory Patent Examiner
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